

REMARKS

By the above actions, claims 1, 3-6, 11, 12, 14-18 & 20 have been amended and claim 8 cancelled. In view of the amendments made and the following remarks, further consideration of this application is requested.

The rejection of the claims under § 112, first paragraph has been rendered moot by the deletion of the language that formed the basis of this rejection. Thus, this rejection should now be withdrawn and such action is requested.

Claim 1 was again rejected under 35 USC § 102 s being anticipated by the disclosure of the Sekiya patent. At least to the extent that this rejection relates to the claims as now presented, it should be withdrawn for the following reasons. This rejection has been rendered moot by the incorporation of a portion of claim 5 into claim 1. That is, as shown in Figs. 4-8 and described in paragraphs [0101] to [0105] and [0144], unlike Sekiya, the claimed method, when the adhesive tape is expanded, forms a loose part SA near an outer periphery of the adhesive tape near the outer periphery thereof so as to form an annular protrusion surrounding the chips by nipping and securing the annular protrusion.

While it is recognized that the Examiner expressed the view that claim 5 was unpatentable over Sekiya when viewed in combination with Bailey, it is submitted that such is not the case for the following reasons.

First, it is pointed out that no one of ordinary skill in the art to which the present invention and that of Sekiya are directed would look to a patent directed to "strapping a bundle of articles" (Abstract) for teachings relating to how to maintain an adhesive sheet with dice chips in an expanded state. Furthermore, in Bailey, the bundle 24 is inserted between an upper head 39 and a lower head 40 in Figs. 2 & 4-7 so as to be embraced by a strap, after which the strap is severed by a strap severing blade 49 and heater bars 50. However, this operation bears no relationship to that of the present invention or Sekiya. The strap 38 of Bailey embraces the bundle but is not part of the bundle and the bundle is not expanded. On the other hand, the protrusion of the present invention is a loose part of the expanded adhesive sheet formed near an outer periphery thereof by the expansion of the sheet. Put another way, Bailey requires a strap for binding his bundle 24 and no counterpart to such a strap exists in the present invention or in Sekiya. The Examiner's proposed combination is both illogical and incapable of yielding the claimed invention.

Furthermore, the present invention is not simply different from anything taught by these two references, but also is advantageous thereover. First, because the loose part of the expanded adhesive tape near the outer periphery thereof is gathered, nipped and secured to maintain the expanded state, the shape of the article does not change before and after expansion so that modification of the conveyance device of a conventional system is not required. Furthermore, Sekiya requires rings with various sizes depending on the amount of expansion to be performed; however, such is not the case for the present invention. Furthermore, these advantages are not predictable from anything disclosed by either Sekiya or Bailey.

Accordingly, the rejection under § 103 based on the combined teachings of the Sekiya and Bailey patents is in order and is hereby requested.

With regard to the rejection of claims 12-16 based on the combined teachings of the Sekiya, Moore and Tsujimoto et al. patents, this rejection is inappropriate for the following reasons.

Apart from the points noted about Sekiya, Moore is cited with regard to a vacuum maintaining step that is not recited in any of the rejected claims and which does not produce gathering of a loose part of the expanded adhesive sheet formed near an outer periphery of the adhesive sheet by the expansion of the adhesive sheet so as to form an annular protrusion surrounding the chips.

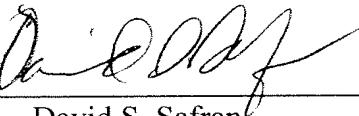
As for Tsujimoto et al., they teach a tape formed of a thermo shrinkable material that is heated to reduce the adhesiveness of the tape after dicing to adjust the spacing between chips. In accordance with Tsujimoto et al., the tape is heated in the area of the chips produces shrinking of the tape so as to facilitate release of the chips (see, Fig. 7). On the other hand, in accordance with the present invention the tape is expanded, not shrunk, and the area that is heated and shrunk is not that where the chips are located, but rather heating and shrinking is performed on a loose part of the expanded adhesive sheet “near the outer periphery of the adhesive sheet to eliminate said loose part.”

Accordingly, no reasonable combination of the teachings of these references consistent with their teachings could lead one of ordinary skill to the present invention. Therefore, withdrawal of the rejection under § 103 based on the combined teachings of the Sekiya, Moore and Tsujimoto et al. patents is in order and is now requested.

Claims 18 & 19 were rejected under 35 USC § 103 based on the combined teachings of the Sekiya, Broyles and Tsujimoto et al. patents. This rejection suffers from the deficiencies noted above with regard to Tsujimoto et al. the teachings of which are incompatible with those of Broyles which involves an expandable diaphragm, i.e., separation being produced by expansion instead of heat shrinkage. Furthermore, the loose part 15 is present in Broyles' unexpanded state (see, Fig. 5) and is eliminated in the expanded state (see, Figs. 3 & 4) in direct contrast to the present invention which performs "gathering a loose part of the expanded adhesive sheet formed near an outer periphery of the adhesive sheet by the expansion of the adhesive sheet to form an annular protrusion surrounding the chips." Thus, no combination of these references could lead to the present invention so that this rejection should also be withdrawn.

Therefore, in the absence of new and more relevant prior art being discovered, this application should now be in condition for allowance and action to that effect is requested. However, while it is believed that this application should now be in condition for allowance, in the event that any issues should remain, or new issues arise, after consideration of this response which could be addressed through discussions with the undersigned, then the Examiner is requested to contact the undersigned by telephone for the purpose of resolving any such issue and thereby facilitating prompt approval of this application.

Respectfully submitted,

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